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MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			EXAMINER MAPA, MICHAEL Y	
			ART UNIT 2617	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing.US@motorola.com

Office Action Summary

Application No.

10/597,623

Applicant(s)

BAR ET AL.

Examiner

Michael Mapa

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 04/06/09 has been considered by the examiner.

Response to Amendment

2. The applicant has amended the following:
 - Claims: 20 have been amended.
 - Claims: 31 – 32 have been added.
 - Claims: 21 – 30 have not been mended.
 - Claims: 1- 19 have been cancelled.

Response to Arguments

3. Applicant's arguments filed 03/12/09 have been fully considered but they are not persuasive.

The applicant argues features wherein a method of radio communication wherein a mobile station maintains a first communication group set comprising an ordered list of two or more groups for the purpose of scanning for radio frequency activity among the group and monitoring periodically to determine if there is any radio communication amongst each group wherein the communication group comprises user groups which communicate by direct mode communication on a direct mode channel for the group

and monitoring the direct mode channels periodically to determine if there is any radio frequency activity on the direct mode channels, read on Mikkola in view of TETRA STANDARDS as follows:

Mikkola in view of TETRA STANDARDS discloses a user terminal (UT) belonging to multiple groups and having each group with a different priority, therefore a mobile station maintaining a first communication group set comprising an ordered list of two or more groups. Mikkola in view of TETRA also discloses hearing traffic from one group at the time and traffic from a more important group will interrupt other traffic, therefore scanning for radio frequency activity among the group and monitoring periodically if there is any radio communication amongst each group. Mikkola in view of TETRA discloses having an adhoc (direct mode) group type, therefore communication between groups is done via adhoc or direct mode communication.

With regards to the arguments of the applicant concerning claim 1, claim 1 has been cancelled and is therefore not pertinent to the case.

With regards to the applicants' arguments that Mikkola discloses a logical entity and not the physical mobile device and that they are separate from each other and does not occur in the mobile device or using direct mode, the examiner respectfully disagrees. Mikkola discloses that the terminal and the user are interchangeable terms **(Paragraph [0021] of Mikkola, therefore the user disclosed in Paragraph [0089] of Mikkola is the user terminal (mobile device) which reads on the claimed limitation)**. Mikkola continues to disclose having an adhoc (direct mode) group type **(Paragraph [0082] of Mikkola, therefore since a parameter indicates an adhoc**

(direct mode) group, communication between the groups will be in adhoc or direct mode).

With regards to the applicants arguments that Mikkola is merely describing values the parameter generally takes and therefore not an indication of a direct mode. The examiner respectfully disagrees. Mikkola discloses that the group type parameters are for an adhoc (direct mode) group **(Paragraph [0082] of Mikkola, therefore since a parameter indicates an adhoc (direct mode) group, communication between the groups will be in adhoc or direct mode).**

With regards to the applicants arguments that Mikkola does not enable his technique for DMO communications, the examiner respectfully disagrees Mikkola discloses the technique having different group types whether a normal group or an adhoc (DMO) group **(Paragraph [0082] of Mikkola, therefore a communication between the adhoc groups will be DMO communications).** Therefore one of ordinary skill in the art would recognize that both groups whether normal or adhoc (DMO) group would use the techniques described by Mikkola for the purpose of improving the system by implementing the invention in both groups.

In response to applicant's argument that the TETRA STANDARD cannot be used in conjunction with Mikkola, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references

would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Mikkola discloses DMO communication as is evident in this office action and the TETRA STANDARDS discloses the method and standard for DMO communication, therefore it would have been obvious to one of ordinary skill in the art to modify the invention of Mikkola to incorporate the teachings of the TETRA STANDARDS for the purpose of conforming to known standards.

Therefore, the argued limitations read upon the cited references or are written broad such that they read upon the cited references, as follows:

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 20-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mikkola (US Patent Publication 2004/0024902) in view of TETRA STANDARDS (ETS 300 396-3 herein after referenced as TETRA).

Regarding claim 20, Mikkola discloses "a method of radio communication comprising at a mobile station" (Paragraphs [0085], [0089] & [0092] of Mikkola,

wherein Mikkola discloses the parameters of the UT can be changed and the list of scanned groups can be edited by the user and wherein the UT checks and compares the priorities of the received speech item, therefore within the mobile station). Mikkola discloses "maintaining at least a first communication group set comprising an ordered list of two or more user groups for the purpose of scanning for radio frequency activity among some or all of the groups;" **(Paragraph [0089] of Mikkola, wherein Mikkola discloses the list of scanned groups with priorities).** Mikkola discloses "conducting a surveillance procedure to determine if there is any radio frequency activity comprising a communication amongst each group;" **(Fig. 6, Paragraph [0092] & [0089] of Mikkola, wherein Mikkola discloses the UT checks whether a speech item is received and whether the priority of received speech item A is higher than the priority of speech item in the buffer as well as hearing traffic from one group but traffic from a more important group will interrupt other traffic, therefore a surveillance procedure).** Mikkola discloses "wherein the first communication group set comprises user groups (A, B, C) which communicate together by direct mode communication on an associated direct mode radio frequency channel for the group" **(Paragraph [0081] – [0082] and [0089], wherein Mikkola discloses a user joining a group, wherein a group could be a normal group or an ad hoc group (direct mode) and wherein a user belonging to multiple groups hears traffic from one group at the time but traffic from a more important group will interrupt other traffic).**

Mikkola fails to explicitly recite "conducting a surveillance procedure periodically" and "wherein each of the direct mode radio frequency channels associated with the groups of the ordered list is sampled periodically to determine if there is any radio frequency activity comprising a direct mode communication on the direct mode radio frequency channel." However, the examiner maintains that it was well known in the art for the system and method of Mikkola to use the specifics and standard taught in TETRA.

TETRA discloses a "conducting a surveillance procedure periodically" and "wherein each of the direct mode radio frequency channels associated is sampled periodically to determine if there is any radio frequency activity comprising a direct mode communication on the direct mode radio frequency channel" (**TETRA STANDARD 8.4.2.2.1 (Page 77), wherein TETRA discloses continuous monitoring of the DM radio frequency carrier which means that a DM-MS shall sample the DM radio frequency carrier at a sufficient rate so that the presence of a DSB may be determined**).

Mikkola discloses TETRA as a known standard in the field (**Paragraph [0040] of Mikkola**). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system and method taught by Mikkola to use the standards taught in TETRA with regards and applicable to the invention of Mikkola, the motivation for the combination being to conform with the known standard. Mikkola in view of TETRA STANDARDS reads on claimed "wherein each of the direct mode radio frequency channels associated with the groups of the ordered list is sampled

periodically to determine if there is any radio frequency activity comprising a direct mode communication on the direct mode radio frequency channel.”

Regarding claim 21, Mikkola in view of TETRA discloses “the method according to claim 20 wherein each of the direct mode radio frequency channels is sampled to detect a presence signal indicating presence of a particular group associated with the direct mode channel on the direct mode channel” **(Paragraph [0089] in view of TETRA STANDARDS 8.4.2.2.1 (Page 77), wherein Mikkola discloses hearing traffic from one group at the time but traffic from a more important group will interrupt other traffic, therefore detecting a presence signal).**

Regarding claim 22, Mikkola in view of TETRA discloses “frequency channels whose state is free in a single frame” **(Fig. 1, TETRA STANDARDS 4.3.2 (Page 18) & 8.4.2.1 (Page 76), wherein TETRA discloses a frame with “OCC” denoting occupation of slot 3, and a channel free definition wherein no activity is detected other than possible receipt of presence signals indicating channel is free).** Mikkola in view of TETRA fails to explicitly recite “the method according to claim 20 wherein samples of some or all consecutive group radio frequency channels whose state is free or unknown are conducted in a single frame.” However the examiner maintains that it is obvious to one of ordinary skill in the art to modify the invention of Mikkola in view of TETRA to incorporate what is known in the art.

It is commonly known in the art to use multiplexing for the purpose of sharing an expensive resource as is evident as a reference only in Shridhar et al. (US Patent

7406042 herein after referenced as Shridhar). Shridhar discloses multiple channels within a single frame (Column 5, Lines 54-56 of Shridhar).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate what is commonly known in the art of multiple channels within a single frame for the purpose of conserving network resources and as such reads on claimed "the method according to claim 20 wherein samples of some or all consecutive group radio frequency channels whose state is free or unknown are conducted in a single frame."

Regarding claim 23, Mikkola in view of TETRA discloses "the method according to claim 20 wherein if there is currently no group activity on any of the surveyed channels, then a mobile station acting as a first master mobile station initiating a call or service to start on any of the groups determines a physical and logical time division pattern for all surveyed channels" (**TETRA STANDARD 4.3.2 (Page 18), wherein TETRA discloses the calling DM-MS may linearize its transmitter then establishes the channel synchronization and its role as master by transmitting synchronization bursts).**

Regarding claim 24, Mikkola in view of TETRA discloses "the method according to claim 20 wherein all other mobile stations detecting a first call or service, synchronise to the time division pattern, adopting the same frame and slot numbering as a first master mobile station" (**TETRA STANDARDS 4.3.2 (Page 18) & 4.3.4 (Page 20), wherein TETRA discloses the process of synchronizing with the master wherein the timing state of the channel, including the frame and slot numbers is**

determined).

Regarding claim 25, Mikkola in view of TETRA discloses "the method according to claim 23 wherein each master mobile station making a direct mode call transmits a presence signal in a specific time slot to indicate a group to which the call relates" **(Paragraph [0089], wherein Mikkola discloses traffic from one group will be interrupted by traffic from a more important group, therefore a presence signal in a timeslot specified for the important group).**

Regarding claim 26, Mikkola in view of TETRA discloses "the method of direct mode radio communication according to claim 25 wherein the specific time slot in which a master mobile station transmits a presence signal is related to a position within the ordered list of the group that the master mobile station is communicating with." **(Paragraph [0089], wherein Mikkola discloses comparing priorities of the different groups, therefore the timeslot are given the same priorities as the group within the list and as such is related to a position (priority) within the ordered list of the group).**

Regarding claim 27, Mikkola in view of TETRA discloses "the method of direct mode radio communication according to claim 26 wherein the specific time slot in which the master mobile station transmits is within a TETRA request bit map associated frame related to the position within the ordered list of the group that the master mobile station is communicating with" **(TETRA STANDARDS 9.6.13 (Page 148) & Fig. 1 of 4.3.2 (Page18), wherein TETRA discloses the request bitmap to be timeslot 3 of frames 1, 4, 7, 9, 10... and is therefore associated with the timeslots for communication).**

Regarding claim 28, Mikkola in view of TETRA discloses "the method of direct mode radio communication according to claim 26", however, fails to explicitly disclose "wherein the master mobile station signals all call or service recipients that the TETRA request bit map associated time slots are not available for random access requests." However, the examiner maintains that it is well known in the art to modify the invention of Mikkola in view of TETRA to set the request bit map associated timeslots as not available for random access.

TETRA discloses a master MS may conduct dual watch operation or some form of battery economy mode during channel reservation by dictating which frames the random access messages will be used and monitored by the master MS (**TETRA STANDARDS 8.4.7.9 (Page 92)**).

Therefore it would have been obvious to one of ordinary skill in the art to modify the invention of Mikkola in view of TETRA to set the request bit map associated timeslots as not available for random access request, the purpose of which is to conserve network resources (battery economy mode) by not having to allocate resources to monitor the request bitmap timeslots.

Regarding claim 29, Mikkola in view of TETRA discloses "the method of direct mode radio communication according to claim 26 wherein any slave or idle mobile station surveys a specific time slot on a relevant channel to determine if there is any radio frequency activity, the time slot channel being related to the position within the ordered list of the group that the slave or idle mobile station is currently surveying" (**TETRA STANDARDS 8.4.2.2.2 (Page 77)**), wherein TETRA discloses any DM-MS

(Direct Mode Mobile Station) in idle mode shall periodically conduct further channel surveillance in order to detect any DSBs (Direct Mode Synchronization Burst) present on the DM radio frequency carrier).

Regarding claim 30, Mikkola discloses "a mobile station for direct mode communication comprising: storage means storing at least a first direct mode group set comprising an ordered list of two or more user groups together with their respective associated direct mode radio frequency channels, for the purpose of scanning for alternative radio frequency activity among some or all of the groups;" **(Paragraphs [0082], [0085], [0089] & [0092] of Mikkola, wherein Mikkola discloses the parameters of the UT can be changed and the list of scanned groups can be edited by the user and wherein the groups can be an ad hoc group (direct mode) and wherein the UT checks and compares the priorities of the received speech item).**

Mikkola fails to explicitly recite "wherein the mobile station is operable, for those groups in the ordered list whose radio frequency channel state is free or unknown, to conduct a channel surveillance procedure wherein each of the direct mode radio frequency channels associated with the groups of the ordered list is sampled periodically to determine if there is any radio frequency activity comprising a direct mode communication." However, the examiner maintains that it was well known in the art for the system and method of Mikkola to use the specifics and standard taught in TETRA.

TETRA discloses a "channel state is free or unknown " (**TETRA STANDARDS Fig. 1, 4.3.2 (Page 17) & 8.4.2.1 (Page 76)**, wherein TETRA discloses a frame with "OCC" denoting occupation of slot 3, and a channel free definition wherein no activity is detected other than possible receipt of presence signals indicating channel is free) and "conducting a surveillance procedure periodically" and "wherein each of the direct mode radio frequency channels associated is sampled periodically to determine if there is any radio frequency activity comprising a direct mode communication on the direct mode radio frequency channel" (**TETRA STANDARD 8.4.2.2.1 (Page 77)**, wherein TETRA discloses continuous monitoring of the DM radio frequency carrier which means that a DM-MS shall sample the DM radio frequency carrier at a sufficient rate so that the presence of a DSB may be determined).

Mikkola discloses TETRA as a known standard in the field (**Paragraph [0040] of Mikkola**). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system and method taught by Mikkola to use the standards taught in TETRA with regards and applicable to the invention of Mikkola, the motivation for the combination being to conform with the known standard. Mikkola in view of TETRA STANDARDS reads on claimed "wherein the mobile station is operable, for those groups in the ordered list whose radio frequency channel state is free or unknown, to conduct a channel surveillance procedure wherein each of the direct mode radio frequency channels associated with the groups of the ordered list is

sampled periodically to determine if there is any radio frequency activity comprising a direct mode communication.”

Regarding claim 31, Mikkola in view of TETRA discloses “The method of direct mode radio communication according to claim 20 wherein the surveillance procedure is performed independent of whether the mobile station is in an idle state or whether the mobile station is participating as a listener in a direct mode communication” (**Paragraph [0089] of Mikkola**).

Regarding claim 32, Mikkola in view of TETRA discloses “The method of direct mode radio communication according to claim 20 further comprising permitting the mobile station to join a call from any group for which direct mode communication was detected by the surveillance procedure as a listener or to initiate a call to members of the detected group” (**Paragraph [0089] of Mikkola**).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Mapa whose telephone number is (571)270-5540. The examiner can normally be reached on MONDAY TO THURSDAY 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571)272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Mapa/
Examiner, Art Unit 2617

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/NICK CORSARO/
Supervisory Patent Examiner, Art Unit 2617